

of my specimens (see fig. 547) to a small bundle of the dried-up eggs of the common English frog, which he had obtained in a black and carbonaceous state (see fig. 548) from the mud of a pond near London, that he suggested a batrachian origin for the fossil; and Mr. Newport concurred in the idea, adding that other larger and more circular fossils (fig. 549), which I procured from shale in the same "Old Red," occurring singly or in pairs, and attached to the leaves of plants, might possibly be the ova of some gigantic triton or salamander.

The general absence of reptilian remains from strata of the Devonian period will weigh strongly with many geologists against such conjectures.

"*Old Red*" in the North of Scotland.—The whole of the northern part of Scotland, from Cape Wrath to the southern flank of the Grampians, has been well described by Mr. Hugh Miller as consisting of a nucleus of granite, gneiss, and other hypogene rocks, which seem as if set in a sandstone frame.* The beds of the Old Red Sandstone constituting this frame may once perhaps have extended continuously over the entire Grampians before the upheaval of that mountain range; for one band of the sandstone follows the course of the Moray Frith far into the interior of the great Caledonian valley, and detached hills and island-like patches occur in several parts of the interior, capping some of the higher summits in Sutherlandshire, and appearing in Morayshire like oases among the granite rocks of Strathspey. On the western coast of Ross-shire, the Old Red forms those three immense insulated hills before described (p. 67), where beds of horizontal sandstone, 3000 feet high, rest unconformably on a base of gneiss, attesting the vast denudation which has taken place.

As the mineral character of the "Old Red" north of the Grampians differs considerably from that of the south, especially in the middle and lower divisions, I shall now allude to it separately. The upper portion, consisting of light-colored sandstones, and containing the *Telerpeton* of Elgin, has been already classed, A., p. 412, as the equivalent of the yellow sandstone of Fife. That upper member passes downwards into red and variegated sandstone and conglomerate, which may correspond with the beds called B., in the same section at p. 412. To the above succeeds, in the descending order, "the middle formation" of Mr. Hugh Miller, composed of thin, fissile, gray sandstone, in which, in Morayshire, Dr. Malcolmson found a species of *Cephalaspis*; but whether these beds are of the age of the paving-stone of Arbroath (C. Table, p. 412) is as yet uncertain.

Next below is the "inferior division" of Hugh Miller, comprising—

- a. *Red and variegated sandstones.*
- b. *Bituminous schists.*
- c. *Coarse sandstone.*
- d. *Great conglomerate.*

In the schists *b*, a great variety of fish are met with in the counties of Banff, Nairn, Moray, Cromarty, and Caithness, and also in Orkney, belonging to the genera *Pterichthys* (fig. 550), *Coccosteus*, *Diplopterus*, *Dipterus*, *Cheiracanthus*, *Asterolepis*, and others described by Agassiz.

* "Old Red Sandstone," 1841.